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ABSTRACT

A study examined rural students' academic aspirations and expectations, their perceptions of their parents' aspirations and expectations, and their parents' actual aspirations and expectations. Surveys were completed by 3,733 seventh grade-students in 54 schools in 17 West Virginia counties. Parent response rates were lower, with approximately two thirds of mothers and slightly less than half of fathers responding. Forty four of the schools were rural. Results indicated that rural parents expected and were expected by their children to play a large role in providing information about continued education. Parents placed a much higher value on the role of the guidance counselor than did students. Female students aspired to a bachelor's degree, and males aspired to an associate's degree. Students felt that their parents' goals exceeded their own and that both parents held these higher aspirations. Parents did report higher aspirations for their children than their children held, but the gap was greater than the students perceived. Both parents and students reported similar perceptions of students' academic effort, with at least half reporting effort equivalent to peers and a fourth professing greater effort. Parents reported little contact with schools about courses and grades needed to get into college. Parents and students had reasonably accurate expectations concerning college costs, but low-income parents were doubtful they could afford it. There was a disconnect between academic expectations and educational aspirations that could lead to disappointment and the failure to achieve those aspirations. (TD)

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Academic Aspirations and Expectations: Perceptions of Rural Seventh Graders and Their Parents

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INTRODUCTION

In 1999, the U.S. Department of Education began funding five-year state and partnership grants for Project GEAR UP (Gaining Early Awareness and Readiness for Undergraduate Programs). These grants focus on encouraging disadvantaged youth to have high expectations, stay in school, and take academically rigorous courses to prepare them for college. Fairmont State College (FSC) in West Virginia received a grant in 1999 and the West Virginia Department of Education (WVDE) received a grant in 2000. Both agencies contracted with AEL, a nonprofit educational research and development organization in Charleston, West Virginia, to design, administer, and analyze annual baseline surveys of seventh graders and their parents to gain information on student and parent awareness of, interest in, and aspirations for students' postsecondary goals and expectations.

Rural Research

Influence of others. The influence of significant others, such as family and friends, in academic aspirations has been shown to be important and to persist throughout high school. At the eighth grade level, Mau (1995) found that students were more likely to consult parents and peers regarding high school planning than teachers or counselors. This was consistent across social and gender lines. Murdock, Anderman, and Hodge (2000) found seventh-grade peer influence to be a predictor of ninth graders' academic self-concept and motivation or effort; this perception of peers' influence remained stable from seventh to ninth grade.

Studying this dynamic as time decreases for placing plans into action, Mau, Hitchcock, and Calvert (1998) surveyed students' perception of college expectations of significant others. In tenth grade, students perceived parents and relatives to be more likely to have college expectations than counselors or teachers; peers and coaches were least likely to hold these expectations. By 12th grade, counselors were perceived to be more likely to have college expectations than fathers. However, students reported increased perceived college expectations from both parents.

Perceived parental aspirations appear to play an influential role in students' academic aspirations (Mau, 1995; Wahl & Blackhurst, 2000). Mau (1995) found that parents' perceived goals exceeded those of the students. Gender differences were noted in both students' aspirations and their perceptions of parental aspirations. While race was found to be significant, gender differences held. Parents' actual aspirations were not studied. The current study investigates differences in perceptions between seventh-grade rural students and parents and between their mothers and fathers on who provides this type of information.

Cobb, McIntire, and Pratt (1989) report that rural youth believe their parents are more supportive of them taking full-time jobs, attending vocational schools, or joining the service rather than going to college. In a later study, Hektner (1994) analyzed rural students from 6th through 12th grade, comparing them to urban and suburban students. According to this investigation, rural students appeared to be more likely to be uncertain about their future plans compared to their nonrural counterparts. Rural males appeared less likely to continue their education, especially right after high school. Kampits (1996) found that rural youth have significantly higher graduation rates from high school than urban youth, yet they are less likely to pursue college degrees. Too, rural youth are less likely than more affluent youth to enroll in more demanding college-preparatory courses and are more likely to graduate from high school without firm plans for the future.

This current work expands previous work by investigating rural student gender differences and comparing students' aspirations, their perceptions of their parents' aspirations, and their parents' actual aspirations.

Aspirations and expectations. Mau, Hitchcock, and Calvert (1998) made a distinction between aspirations, or desires without constraints, and expectations, or desires tempered by financial and intellectual considerations. Using these definitions, students and parents' expectations were measured on six questions in the current study. The first set of questions was academic in nature, i.e., an evaluation of how hard the student worked compared to other students and what type of student the child was considered to be. The second set dealt with financial constraints, i.e., the estimated cost of tuition and the students' ability to afford such tuition. The remaining questions dealt with whether discussions with school staff regarding college requirements took place and the main reason why college would not be an option for the students.

METHODS

Sample

Survey data from the 2001-2002 school year for the Fairmont State College and West Virginia Department of Education GEAR UP projects were combined to form the initial data set. The Fairmont project includes nine counties in north central West Virginia and the West Virginia Department of Education (WVDE) project includes eight counties in southern West Virginia. Using the National Center for Education Statistics (2002) Johnson code classification system, 44 of the 54 schools (81%) are classified as rural. In terms of ethnicity, the 17 counties are primarily White. One county reports a student population of 14% African American, six counties report African American populations of 5% or less, and one county reports a 2% Asian student population (Quality Education Data, 2002).

In August 2001, AEL staff assembled survey packets (containing a demographic cover page, a student survey, and two copies of the parent survey) and provided them, in bulk, to Fairmont and WVDE staff for distribution to the participating schools. A staff member at each school packaged the completed surveys and mailed them to AEL. The majority of completed surveys were returned within a four-month period. Two of the WVDE schools, one of which was rural, did not return any surveys.

Of the 2,672 student surveys distributed for the Fairmont project, a total of 2,213 were returned for a response rate of 83%. Of the 1,900 student surveys distributed for the WVDE project, a total of 1,520 were returned for a response rate of 80%. Parental response rates were much lower. The response rates for Fairmont were approximately 72% for mothers and 49% for fathers. For WVDE, the responses rates were approximately 58% for mothers and 45% for fathers (these are approximations since it was unknown to AEL staff whether each student had two available parents or guardians). Response rates cannot be determined specifically for the rural schools, since surveys were provided to Fairmont and WVDE in bulk shipments, i.e., not divided by schools.

Seventh-grade students completed their surveys within their classrooms and took two copies of the parent survey home for their parents or guardians to complete. Teachers filled in the identification code on each survey before

Purpose

The purpose of this study was to examine whether rural students' survey responses differed significantly by gender and from their parents' responses for those items that were asked of both respondent groups.

This study focuses on three aspects of rural seventh graders' academic aspirations and expectations: the role of significant others in providing information regarding education after high school; the interplay of student aspirations, perceived parental aspirations, and actual parental aspirations; and students and parents' perceptions of expectations. The analysis of expectations included measures based on evaluations by students and parents on how hard the student worked in school, the quality of student work, whether discussions with school staff had taken place regarding college requirements, the main reason for not going to college, the anticipated costs of college, and the ability to afford those costs.

distribution. This code consisted of the student's Social Security Number and the county and school where the student attended seventh grade. The identification code made it possible to match the responses of an individual student with the responses of his/her mother and/or father.

This study was drawn from student and parent surveys from the 2001-2002 school year from the 43 participating middle/junior high schools classified as rural within the 17 county school districts in West Virginia. For these analyses, three criteria were used to ensure data validity: (1) the respondent was from one of the 43 rural schools, (2) each respondent had a complete and unique identification code, and (3) at least one parent survey was completed for each student. Out of the original data set of 2,633 rural students, a total of 1,735 cases included matched student and parent data and thus comprise the data set for this study.

Instruments

Two surveys were used for data collection—one survey for seventh graders of participating GEAR UP schools, and one for parents or guardians of the seventh-grade students. Both surveys were administered at participating schools during the fall of 2001 by Fairmont State College and WVDE staff.

In July 2001, AEL staff revised the student and parent GEAR UP surveys. There were three major components to these revisions. First, the two original student surveys (one developed by staff of AEL and Fairmont State College; the other provided by the U.S. Department of Education) were merged into one comprehensive survey that eliminated duplicate items and grouped the remaining items by topic. Second, both the parent and student surveys were converted to a format compatible for an optical mark reader and scanning software program. Third, several item stems and response options were clarified based on data obtained from the previous year's administration.

The student survey contained 90 selected-response items utilizing a variety of response options; the parent survey contained 30 selected-response items, again using a variety of response options. Students were asked about their schoolwork, their knowledge about college, their plans for the future, their background, and their aspirations. Parents were asked to respond to items pertaining to their child, their child's future plans, their knowledge about college, and their background.

Ten of the student items were parallel in nature to eight of the parent items (one student item on academic aspirations was broken out into three separate questions). For each of these items, selected-response options were identical for both students and parents.

Cronbach alpha reliability estimates were computed to assess the degree to which items measure the same construct (internal consistency). The 2001-2002 rural student survey data resulted in a coefficient of .91; the rural parent survey data resulted in alpha coefficients of .76 for mothers and .77 for fathers.

Data Analyses

Analyses focused on differences between students and parents, as well as by gender within each group. Data were analyzed using the SPSS Version 11 statistical software package. Analyses utilized included general frequencies (number and percent) and descriptive statistics (mean and standard deviation).

Inferential statistics were utilized to detect differences within and between groups. Parametric General Linear Model (GLM) Univariate Analyses of Variance (ANOVAs) were used for interval data analyses and nonparametric chi-square tests of independence were used for categorical data analyses. It should be noted that many of the items analyzed using ANOVAs were actually ordinal in nature, but were treated as interval (one of the ANOVA assumptions) in order to conduct this exploratory research. Pairwise comparisons were used as needed to identify significant differences among multiple groupings.

Associative statistics measured the strength of the relationship between variables. Pearson correlation coefficients were generated for ANOVAs and Cramer's *V* values for chi-squares.

Factor analysis using Varimax rotation with Kaiser correction was also utilized in an exploratory manner to investigate how items included in this study would be grouped based on respondents' perceptions. Each case included a student's responses, along with both parents' responses (excluding those cases in which only one parent responded). Factors were generated by student gender, and included 374 females and 332 males. Data were organized in this manner so that the unit of analysis would be on a familial level.

For all of the analyses described above, the alpha level for the Type 1 error was established at $p < .05$. See Table 1 for a listing of each of the items under study from the student and parent surveys.

Table 1: Items Under Study From Student and Parent Surveys

Student Survey Items	Parent Survey Items
(2) Compared with other students, how hard do you think you work in school?	(4) Compared with other students, how hard do you think your child works in school?
(3) What type of student do you consider yourself to be?	(5) What type of student is your child?
(25) Have you ever talked with your school counselor or someone else at your school about the entrance requirements for college?	(15) Have you ever talked with anyone at your child's school about the courses and grades needed to get into college?
(29) How much do you think it costs for one year of tuition at a four-year public college in your state?	(19) How much do you think it costs for one year of tuition at a four-year public college in your state?
(31) What do you plan to be when you grow up?	N/A
(34) From whom do you get most of your information about your options for continuing your education after high school?	(13) Who provides your child with information about options for continuing education after high school?
(35) How far in school do you think you will get?	N/A
(36) What is the main reason you would not continue your education after high school?	(14) What would be the main reason for your child not continuing his/her education after high school?
(37) Do you think you will be able to afford to attend a four-year college or university after high school?	(20) Do you think your child would be able to afford to attend a public four-year college or university?
(40) How much education do you think your father or male guardian wants you to get?	N/A
(41) How much education do you think your mother or female guardian wants you to get?	(12) How far in school would you like to see your child go?

RESULTS

The results are organized by role of others in providing educational information, academic aspirations, academic expectations, and factor analyses.

Role of Others in Providing Educational Information

One question on the student survey asked respondents to select any or all of 12 types of people who provided them with information about their options for continuing their education after high school. Students most often chose various family members: parents (82% males, 86% females); grandparents (32% males, 35% females); siblings (21% males, 24% females); and some other family member such as aunt, uncle, or cousin (22% males, 34% females). However, about half of the students (41% males, 51% females) also selected teachers. See Table 2 for the actual response frequencies and percentages by student gender for each type of person they indicated provided them with educational information.

Table 2: Response Frequencies and Percentages by Student Gender for People From Whom Students Receive Educational Information

Option	Males		Females	
	Frequency	Percent	Frequency	Percent
Parent or guardian	633	82%	774	86%
Grandparent	249	32%	313	35%
Brother or sister	165	21%	215	24%
Other family member	172	22%	301	34%
Friend	118	15%	235	26%
Religious leader	34	4%	43	5%
Teacher	318	41%	462	51%
Guidance counselor	80	10%	110	12%
Principal or assistant principal	82	11%	121	14%
Coach	71	9%	61	7%
GEAR UP staff	70	9%	72	8%
Some other person	103	13%	133	15%

A chi-square test of independence was conducted for each of these 12 variables by gender. Statistically significant relationships were found between gender of the student and their choice of parent, other family member, friend, and teacher. For all four, females had higher than expected counts. Cramer's *V* values (strength of association between variables) for these four analyses were all significant. See Table 3 for additional statistical information.

Table 3: Statistical Information for Significant Chi-Squares by Student Gender for People From Whom Students Receive Educational Information

Option	*df*	Chi-square*	Cramer's *V**
Parent	1	6.34	.06
Other family	1	26.32	.12
Friend	1	29.94	.13
Teacher	1	18.14	.10

*$p < .05$

A parallel question was also asked of parents on their survey. Parents' responses were similar to students, but their most frequent choices included additional school staff: parent (86% mothers, 85% fathers), teacher (53% mothers, 52% fathers), grandparent (32% mothers, 31% fathers), guidance counselor (30% mothers, 32% fathers), and other family member (31% males, 30% females). See Table 4 for the actual response frequencies and percentages by parent gender for each type of person they indicated provided students with educational information.

A chi-square test of independence was conducted for each of these 12 variables comparing students' responses with those of their mothers. Statistically significant relationships were found between respondents for all 12 variables. The four variables showing the most discrepancy between observed and expected counts were grandparent, sibling, other family member, and teacher. For all four, students and mothers were more likely to agree with each other. Cramer's *V* values for these 12 analyses were all significant, with the largest being .38 for sibling. See Table 5 for additional statistical information.

Table 4: Response Frequencies and Percentages by Parent Gender for People Who Provide Students With Educational Information

Option	Mothers		Fathers	
	Frequency	Percent	Frequency	Percent
Parent or guardian	1,364	86%	993	85%
Grandparent	505	32%	358	31%
Brother or sister	370	23%	276	24%
Other family member	487	31%	353	30%
Friend	274	17%	205	18%
Religious leader	132	8%	103	9%
Teacher	832	53%	607	52%
Guidance counselor	477	30%	378	32%
Principal or assistant principal	219	14%	190	16%
Coach	120	8%	111	10%
GEAR UP staff	292	18%	196	17%
Some other person	107	7%	77	7%

Table 5: Statistical Information for Significant Chi-Squares by Students' and Mothers' Responses for People Who Provide Students With Educational Information

Option	*df*	Chi-square*	Cramer's V*
Parent	1	31.99	.14
Grandparent	1	62.27	.20
Sibling	1	225.76	.38
Other family	1	41.10	.16
Friend	1	16.71	.10
Religious ldr.	1	32.08	.14
Teacher	1	32.05	.14
Guid. coun.	1	23.19	.12
Principal	1	14.25	.10
Coach	1	48.60	.18
GEAR UP staff	1	32.03	.14
Other person	1	16.00	.10

*$p < .05$

A chi-square test of independence was then conducted for each of these 12 variables comparing students' responses with those of their fathers. Statistically significant relationships were found between respondents for all but one of the variables (some other person). The four variables showing the most discrepancy between observed and expected counts were grandparent, sibling, other family member, and teacher. For all four, students and fathers were more likely to agree with each other. Cramer's *V* values for these 11 analyses were all significant, with the largest being .35 for sibling. See Table 6 for additional statistical information.

Table 6: Statistical Information for Significant Chi-Squares by Students' and Fathers' Responses for People Who Provide Students With Educational Information

Option	*df*	Chi-square*	Cramer's *V**
Parent	1	14.04	.11
Grandparent	1	47.78	.20
Sibling	1	144.61	.35
Other family	1	17.91	.12
Friend	1	4.45	.06
Religious ldr.	1	16.27	.12
Teacher	1	7.49	.08
Guid. coun.	1	8.07	.08
Principal	1	8.21	.08
Coach	1	37.34	.18
GEAR UP staff	1	30.86	.16

*$p < .05$

A chi-square test of independence was then conducted for each of these 12 variables comparing parents' responses with each other, i.e., mother and father. Statistically significant relationships were found between gender and all 12 variables. The four variables showing the most discrepancy between observed and expected counts were grandparent, sibling, teacher, and guidance counselor. For all four, mothers and fathers were more likely to agree with each other. Cramer's *V* values for these analyses were all significant and much larger than those involving students, ranging from a low of .44 for parent to a high of .70 for sibling. See Table 7 for additional statistical information.

Table 7: Statistical Information for Significant Chi-Squares by Parent Gender for People Who Provide Students With Educational Information

Option	*df*	Chi-square*	Cramer's V*
Parent	1	197.40	.44
Grandparent	1	379.96	.61
Sibling	1	490.70	.70
Other family	1	283.77	.53
Friend	1	257.22	.50
Religious ldr.	1	324.04	.57
Teacher	1	242.28	.49
Guid. coun.	1	304.08	.55
Principal	1	327.42	.57
Coach	1	218.28	.46
GEAR UP staff	1	408.50	.64
Other person	1	288.31	.53

*$p < .05$

Academic Aspirations

Occupational choice. One question on the student survey asked respondents to select from a list of 30 choices the one occupation they most wanted to be when they grew up. The top three responses for males were athlete (11%), other (11%) and don't know (9%). For females, the top three responses were veterinarian (10%), other (9%), and doctor and don't know (8% each). However, counter to instructions, more than a fourth of both the males (29%) and the females (28%) selected multiple occupations. See Table 8 for the actual response frequencies and percentages by gender for each occupation option.

Table 8: Response Frequencies and Percentages
by Gender for Students' Desired Occupation

Option	Males		Females	
	Frequency	Percent	Frequency	Percent
Actor/actress	3	0%	14	2%
Architect	9	1%	3	0%
Artist	11	1%	9	1%
Athlete	84	11%	28	3%
Astronaut	2	0%	1	0%
Beautician	1	0%	28	3%
Chef	3	0%	3	0%
Computer/video technician	31	4%	4	0%
Construction worker	13	2%	2	0%
Designer/decorator	1	0%	9	1%
Doctor	15	2%	73	8%
Engineer	15	2%	0	0%
Lawyer	20	3%	41	5%
Mechanic	29	4%	3	0%
Military	29	4%	4	0%
Model	0	0%	18	2%
Nurse	2	0%	49	6%
Pharmacist	1	0%	9	1%
Photographer	0	0%	6	1%
Physical therapist	3	0%	5	1%
Pilot	5	1%	0	0%
Police officer	19	2%	1	0%
Race-car driver	17	2%	0	0%
Scientist	16	2%	4	0%
Singer/musician	11	1%	37	4%
Teacher	5	1%	51	6%
Truck driver	31	4%	2	0%
Veterinarian	15	2%	87	10%
Other career	84	11%	84	9%
Don't know	67	9%	71	8%
Multiple responses	225	29%	248	28%
TOTALS	767		894	

A chi-square analysis revealed a statistically significant relationship between occupation and gender (chi-square(30) = 441.50, $p < .05$). The Cramer's *V* value was .52, $p < .05$. In looking at the chi-square for the 10 most frequently selected occupations (each with a total of 35 or more), 7 of those show the largest discrepancies between observed and expected counts for males and females. For five of the occupations, the observed count for females was higher than expected. These occupations included doctor, nurse, singer/musician, teacher, and veterinarian. For the remaining two occupations, the reverse is true in that the observed count for males was higher than expected. These occupations include athlete and computer/video technician.

Educational aspirations. Students were asked how much education they thought they would achieve and their perceptions as to what their mothers and fathers wanted them to achieve. Parents were also asked what they would like to see their child achieve. Response options ranged from less than high school graduation (code of 1), high school graduation, certificate program, associate degree, bachelor degree, to advanced degree (code of 6). More than two thirds of the females aspired to either a bachelor (32%) or an advanced degree (37%), compared to about half of the males (28% and 30%, respectively). In terms of their perceptions of what their parents desired for them, more females again selected bachelor or advanced degrees (74% for fathers' perceived aspiration and 77% for mothers' perceived aspiration), compared to males (66% for perception of fathers and 68% for perception of mothers). Mothers' and fathers' reported aspirations for their children were nearly identical to each other, and differed noticeably from their children in the advanced degree category. Thirty one percent of both the mothers and fathers selected a bachelor degree and nearly half of mothers (43%) and fathers (45%) selected an advanced degree.

For the three student items (students' educational goal and perceptions of their mothers' and fathers' goals), the General Linear Model Analysis of Variance (ANOVA) was employed to determine whether statistically significant differences existed by gender. All three analyses did result in significant differences. Female students had higher educational goals (mean of approximately a bachelor degree) than males (mean of approximately an associate degree). Similarly, female students' perceptions of their mothers' and fathers' desired goals for them were consistently higher than the male students, although all of these ratings fell into the range of a bachelor degree. However, effect sizes (partial eta squared) were small. See Table 9 for additional statistical information.

Table 9: Statistical Information for Significant ANOVAs by Student Gender for Their Academic Goals and Their Perceptions of Their Parents' Goals for Them

Item	*df*	*F**	Partial eta^2	Results
Students' academic goals Females Males	1, 1632	24.46	.02	M < F
Students' perceptions of their mothers' goals Females Males	1, 1501	13.59	.01	M < F
Students' perceptions of their fathers' goals Females Males	1 1602	18.46	.01	M < F

*$p < .05$

Next the interplay among students' educational goals, perceived parental goals, and parents' reported educational goals for their children was investigated. An ANOVA was used to determine whether statistically significant differences existed among these three measures. This analysis did result in statistically significant differences ($F(4,7477) = 24.44$, $p < .05$, effect size of .01). Although significant, the mean responses for all groups approximated a bachelor degree. Pairwise comparisons found that students had significantly lower goals than what they perceived their parents desired for them as well as what parents actually reported. Further, the students' perceived goals of their fathers was significantly lower than their fathers' reported goals. In sum, parents' academic goals for their children were the highest, students' perceptions of their parents' goals for them were lower, and students' own expected academic goals were yet lower.

Finally, in order to measure the strength of the relationships among these five groups (students' own goals, students' perceptions of their mothers' or fathers' goals, and mothers' or fathers' reported goals), Pearson correlation coefficients were computed. These values showed moderate strength, ranging from a positive .38 for the correlation between students' reported goals with fathers' reported goals to a positive .74 for the correlation between students'

perceptions of their mothers and fathers' goals. See Table 10 for this correlation information.

Table 10: Pearson Correlation Coefficients for Academic Goals by Students, Students' Perceptions of Parents, and Parents

	Students' perceptions of mothers	Students' perceptions of fathers	Mothers' reported goals	Fathers' reported goals
Students' reported goals	.57*	.60*	.40*	.38*
Students' perceptions of mothers		.74*	.41*	
Students' perceptions of fathers				.41*
Mothers' reported goals				.70*

*$p < .05$

Academic Expectations

Work ethic. For the concept of work ethic, students and parents were asked how hard the student worked in school compared to other students. Response options ranged from not nearly as hard (code of 1), not as hard, about the same, harder, to much harder (code of 5). More than half of the students (65% males, 58% females) said they worked about the same as other students; about a fourth (22% males, 28% females) said they worked harder. Parents' responses were similar. About half (55% each of mothers and fathers) said their children worked about the same as others; about a fourth (28% mothers, 30% fathers) said they worked harder.

An ANOVA was first generated to determine whether a statistically significant difference existed between students by gender. The ANOVA did detect a significant difference ($F(1,1642) = 7.67$, $p < .05$, effect size of .01), with a higher average for females than males, but both fell in the middle category of

working about the same as other students. An ANOVA was then generated to determine whether statistically significant differences existed among students, mothers, and fathers' perceptions. This analysis did not result in significant differences; all three groups had responses falling in the middle category of students working about the same as others. Pearson correlations resulted in moderate positive coefficients, all of which were significant. The correlation between mothers and fathers was moderately strong at .63. The correlation between students and mothers was much lower at .35 and the correlation between students and fathers was even lower at .31.

Quality of work. For the concept of quality of work in school, students and parents were asked to describe the student as poor (code of 1), fair, good, or excellent (code of 4). About two thirds of the students (62% males, 67% females) described themselves as good; less than a fourth (14% males, 17% females) chose excellent. Parents' views were higher, with about half (52% mothers, 54% fathers) selecting good and more than a fourth (26% of both mothers and fathers) describing their children as excellent in terms of the quality of school work.

An ANOVA for students by gender found a statistically significant difference between males and females (F=(1,1658) = 11.92, $p < .05$, effect size of .01), with a higher average for females than males, though both averages fell into the good category. A second ANOVA was then conducted to determine if statistically significant differences existed among students, mothers, and fathers. This analysis was also significant (F=(2,4425) = 4.63, $p < .05$, effect size of .01). The averages for mothers and fathers were higher than that for the students, though all three fell into the good category. Pearson correlations resulted in moderate to strong positive coefficients, all of which were significant. The correlation between mothers and fathers was strongest at .78. The correlations between students and mothers and students and fathers were moderately strong at .40.

Tuition costs. Students and parents were asked to indicate how much they thought one year of tuition would cost at a four-year public college in their state. Response options ranged from up to $1,000 (code of 1); $1,001 - $5,000; $5,001 - $10,000; $10,001 - $15,000; $15,001 - $20,000; $20,001 - $25,000; $25,001 - $30,000; to more than $30,000 (code of 8). The most frequent choice by males (20%) was $10,001 - $15,000; for females (19%), the most frequent choice was

$5,001 - $10,000. The option of $5,001 - $10,000 was also parents' most frequent choice, with 29% for both mothers and fathers.

An ANOVA was conducted to determine whether a statistically significant difference existed by student gender; this analysis was not significant. A second ANOVA was then conducted to determine if significant differences existed among students, mothers, and fathers. This analysis was significant ($F(2,4278) = 3.61$, $p < .05$, effect size of .01). Although all three estimates fell in the range of $10,001 - $15,000, the average student estimate was significantly higher than the fathers' estimate. Pearson correlations resulted in low to moderate positive coefficients, all of which were significant. The correlation between mothers and fathers was moderately strong at .70. The correlation between students and mothers was weak at .17, as was the .15 correlation between students and fathers.

Affordability. Students and parents were asked whether they thought the student would be able to afford to attend a four-year college or university. Response options included definitely can't afford it (code of 1), doubt if can afford it, not sure, probably can afford it, and definitely will be able to afford it (code of 5). Thirty eight percent of the males and 41% of the females said they weren't sure; 33% and 31%, respectively, said they probably could afford it. Parents were more unsure, with 43% of both mothers and fathers selecting "not sure" and 23% mothers and 24% fathers indicating their children probably could afford college.

An ANOVA was conducted to determine whether a statistically significant difference existed by student gender; this analysis was not significant. A second ANOVA was then conducted to determine if significant differences existed among students, mothers, and fathers. This analysis was significant ($F(2,4355) = 49.76$, $p < .05$, effect size of .05). Although all three estimates fell in the "not sure" range, the average student estimate was significantly higher than both parents, indicating students were most optimistic about their ability to afford college. The fathers' estimate was also significantly higher than that of the mothers, indicating mothers were least sure their child would be able to afford college. Pearson correlations resulted in moderate to strong positive coefficients, all of which were significant. The correlation between mothers and fathers was strong at .73. Correlations between students and mothers and students and fathers were much lower at .33.

One additional analysis was conducted related to parents' estimate of whether their child would be able to afford college. An ANOVA was generated to determine if statistically significant differences existed by parents' reported yearly income levels. The response options included $10,000 or less (code of 1), $10,001 - $20,000; $20,001 - $30,000; $30,001 - $40,000; $40,001 - $50,000, and more than $50,000 (code of 6). For mothers' and fathers' estimates of their child's ability to go to college, the ANOVAs were statistically significant. Pearson correlations of parents' estimates of their children's ability to attend college with their estimated total yearly income indicated a moderate positive relationship for both mothers (.43) and fathers (.45).

For mothers ($F(5,1413) = 66.53$, $p < .05$, effect size of .19), respondents in each income bracket above $20,000 were significantly different from those in the lowest two income brackets and respondents in the two income brackets above $40,000 were significantly different from those in the middle two income brackets. Respondents in the lowest income bracket were more doubtful their child could attend college, respondents in the middle four income brackets were not sure, and respondents in the top income bracket were fairly sure their child could afford to attend college.

For fathers ($F(5,1029) = 54.04$, $p < .05$, effect size of .21), respondents in each income bracket were significantly different from all others except for respondents in the fourth and fifth income brackets. Respondents in the lowest income bracket were doubtful their child could attend college, respondents in the middle four income brackets were not sure, and respondents in the top income bracket were fairly sure their child could afford to attend college.

Academic eligibility. Another question asked respondents if they had ever talked with a school counselor or some other school staff about the entrance requirements for college. Male and female students' positive responses were nearly identical at 22% and 20%, respectively; parents' responses were somewhat lower, at 9% for mothers and 10% for fathers.

A chi-square test of independence was conducted for this variable by student gender; no statistically significant relationship was found. Chi-squares were then conducted for this variable, comparing students' responses with those of their mothers and fathers; again no statistically significant relationships were found. Finally, a chi-square was conducted comparing mothers and fathers'

responses. A statistically significant relationship was found (chi-square(1) = 233.28, $p < .05$); the Cramer's *V* value of .49 was also significant. Mothers and fathers were more likely to agree with each other.

Perceived impediments to aspirations. Students were also asked to select from a list of 12 choices the main reason they would not continue their education after high school. More than half (54%) of the females and more than a third (38%) of the males indicated there was no reason for them not to continue their education, 13% of the males and 12% of the females said they didn't know why they wouldn't continue their education, and 10% each of the males and females said college cost too much. See Table 11 for the actual response frequencies and percentages by gender for each reason for not continuing their education.

Table 11: Response Frequencies and Percentages
by Student Gender for Not Continuing Their Education

Option	Males		Females	
	Frequency	Percent	Frequency	Percent
No reason, definitely will go	295	38%	460	54%
It costs too much	75	10%	81	10%
Don't need college for job	9	1%	8	1%
Grades not good enough	17	2%	17	2%
I'm just not interested	13	2%	14	2%
I need or want to work	16	2%	15	2%
I want to join the military	49	6%	12	1%
Don't want to be away from home	3	0%	15	2%
Just don't like school	24	3%	14	2%
I want to start a family	15	2%	19	2%
Some other reason	26	3%	19	2%
Don't know	100	13%	106	12%
Multiple responses	88	11%	74	9%
TOTALS	730		854	

A chi-square test of independence was conducted for this variable by gender. A statistically significant relationship was found (chi-square(12) = 63.12, $p < .05$), and the Cramer's *V* value of .20 was significant. As this was a forced-choice response among a listing of 12 reasons, several choices had few responses. In looking at the two most frequently selected reasons (each with a total of more

than 200), one showed the largest discrepancy between observed and expected counts for males and females. The observed count for females was higher than expected for the option that there was no reason not to continue their education, that they definitely would go to college. This finding parallels those noted earlier with females' most frequently desired occupations requiring a college degree.

This same question was also asked of parents. Their responses echoed those of the students: no reason for their child not going to college (mothers, 35%; fathers, 36%); college cost too much (mothers, 29%; fathers, 27%); and don't know why their child would not go to college (mothers, 11%; fathers, 13%).

Chi-squares were conducted for this variable, comparing students' responses with those of their mothers and fathers and comparing mothers with fathers. These analyses were modified to include only the three most frequently selected reasons (no reason, costs too much, and don't know), since these three options comprised the majority of responses. Statistically significant relationships were found for each analysis, with significant Cramer's *V* values. For this variable, students and mothers, students and fathers, and mothers and fathers were more likely to agree with each other. See Table 12 for additional statistical information.

Table 12: Statistical Information for Significant Chi-Squares by Students' and Parents' Responses for Main Reason for Not Attending College

Option	*df*	Chi-square*	Cramer's *V**
Students' responses with mothers	4	79.12	.22
Students' responses with fathers	4	76.04	.25
Mothers' responses with fathers	4	606.48	.68

*$p < .05$

Factor Analyses

Factor analysis using Varimax rotation with Kaiser correction was utilized in an exploratory manner to investigate how items included in this study would be grouped, based on respondents' perceptions. Each case included a student's responses, along with both parents' responses and excluded those cases where only one parent responded. Data were organized in this manner so that the unit of analysis would be on a familial level. Furthermore, factors were analyzed separately based on student gender (males with both parents = 332; females with both parents = 374). All items previously analyzed were included in these factor analyses except for two: the item identifying who provided educational information to the student and the item identifying the main reason why students would not attend college.

First, a two-factor model was generated to explore whether items would confirm Mau, Hitchcock, and Calvert's (1998) concern that aspirations (desires without constraints) and expectations (desires tempered by financial and academic considerations) could appear as two separate entities. For both males and females, these models were not conceptually distinguishable or strong, accounting for only 32% (females) to 35% (males) of the variance. Then, a three-factor model was generated to further delineate underlying concepts of each construct. Table 13 provides the three-factor model for females; Table 14 provides the same information for males. Refer back to Table 1 (see page 7) for a listing of each survey item.

The items in Factor 1 dealt mostly with aspirations, with some aspects of financial considerations. These consisted of items measuring how far students expected to go in school, students' perceptions of parental expectations, parents' reported expectations, and students' perceptions of the affordability of college attendance. For males, this factor also included the mothers' and fathers' perceptions of affordability.

Table 13: Three-Factor Model for Female Students With Both Parents

Factor 1: Aspirations		Factor 2: Academic Expectations		Factor 3: Finances and Affordability	
Item*	Loading	Item*	Loading	Item*	Loading
S40	.795	F5	.731	M19	-.789
S41	.779	F4	.703	F19	-.779
S35	.722	M4	.666	F20	.550
M12	.668	M5	.662	M20	.536
F12	.645	S3	.557		
S37	.501	S2	.534		
		F15	-.252		

N = 374.

This model accounts for 42% of the variance.

*Key: S = Student item, M = Mother item, F = Father item.

Table 14: Three-Factor Model for Male Students With Both Parents

Factor 1: Aspirations and Affordability		Factor 2: Academic Expectations		Factor 3: Finances and Planning	
Item*	Loading	Item*	Loading	Item*	Loading
S40	.794	M4	.793	M19	.810
S41	.793	M5	.742	F19	.798
S35	.719	F5	.732	S29	.420
M12	.692	F4	.710	F15	.329
F12	.670	S3	.480		
M20	.589	S2	.413		
F20	.550	M15	-.294		
S37	.523				

N = 332.

This model accounts for 43% of the variance.

*Key: S = Student item, M = Mother item, F = Father item.

All the items in Factor 2 dealt with academic expectations. This factor included all measures of academic expectations separate from college requirements and included the students', mothers', and fathers' evaluations of the student's work ethic and quality of work. In addition, for females, it included whether fathers had contacted the school about college academic planning; for males, it included whether mothers had contacted the school. The items were nearly identical for both male and female students.

Factor 3 showed the most disparity by gender of the student. For females, this factor included the mothers' and fathers' estimates of the cost of college tuition and their estimates of affordability. For males, it included the students, mothers', and fathers' estimates of the cost of college, as well as whether the fathers had contacted the school about college academic planning.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of this study, certain conclusions and recommendations are warranted. First, it should be noted that some of the effect sizes accompanying statistical significance were small. Therefore the generalizability of the data should be treated with caution.

The academic aspirations and interests of a large group of rural West Virginia seventh graders have been compared by gender and against their parents' perceived and reported aspirations for their children. The critical role that parents and other family members play in helping a child develop academic aspirations cannot be overstated. This research identifies some of the disconnect between what students believe about themselves, what they think their parents believe about them, and what the parents actually believe. It also explores differences between students and parents and students by gender. Such information is vital to those involved in any area of youth education.

Role. The results of this study indicate that rural parents expect and are expected by their seventh-grade children to play a large role in providing information about continued education. Mau (1995) found that eighth graders share that view as well. Since parents and other family members hold such an important position, they need to take an active role by beginning to help students shape their educational future. They can do this by establishing and communicating clear values and expectations; becoming knowledgeable of high school graduation requirements and college entrance requirements and costs; and staying involved in a student's academic life throughout the middle and high school years.

While both rural parents and students expected teachers to play a role in providing educational information, parents placed a much higher value on the role of the guidance counselor than did the students. Counselors can use these results to more accurately target, reach, and provide pertinent information to those individuals with the most influence over students' decision making. Educators, counselors, and other school staff can use these findings to help rural students become more interested in setting long-term educational goals throughout their middle-school years.

One of the major concerns to emerge from this study is the source of information that rural students receive regarding college and careers. By their responses, rural parents clearly expect that school-based personnel are helping them in providing educational information to their children. However, the students assign little informational value to school personnel outside the role of teacher.

Aspirations. Gender differences were found in rural seventh graders' aspirations as defined by their college goals. On average, females expected to obtain a bachelor degree and males aspired to an associate degree. By comparing males' and females' choice of careers, the results appear to be consistent. Females were more likely to choose careers that mandated a degree beyond the bachelors (doctor, lawyer, nurse, teacher, and veterinarian), while males' career choices (athlete, computer/video technician, mechanic, military, and truck driver) did not necessarily have that requirement.

Mau (1995) and Wahl and Blackhurst (2000) found that perceived parental aspirations appear to influence career development, and students perceived their parents' goals for them to be higher than the ones they held for themselves. This study of rural seventh graders also found that students' perceptions of their parents' goals exceeded their own and that both parents held these higher aspirations. By taking the investigation a step further, it was found that the students were correct. Rural parents did report higher aspirations for their children than the children themselves held, and there was concordance between the parents. However, the preadolescents had underestimated the difference. The gap was much greater than the students perceived. This may be due to the parents' better understanding of the educational requirements of their children's preferred careers. Unlike the picture of rural parents' aspirations as painted by Cobb, McIntire, and Pratt (1989) more than a decade earlier, these rural parents professed to hold high collegiate aspirations for their children.

Academic expectations. Both rural parents and students reported similar perceptions of school effort, with at least half reporting effort equivalent to peers and a fourth professing greater effort. There was a high concordance between the parents' perceptions, but the correlation between students and their parents was lower.

A similar pattern was noted for the measure of the quality of school work done by the rural students, with about two thirds of the students and at least half

of the parents indicating a good standard of work. Parents' perceptions of their child as a student were higher than that held by the student and highly correlated between mother and father.

One concern to note, though, is the rural mothers' and fathers' responses to the question about whether they had contacted anyone in the school about courses and grades needed to get into college. The parents, who have the most influence as a source of information, reported little contact with the school on this vital question (9% for mothers and 10% for fathers). If students are taking courses that will not prepare them to succeed in college, then the amount of effort and the achievement in these classes will not give a valid measure of predicted success. Kampits (1996) noted the lack of college-preparatory course choices by rural youth and the resulting decreased college-going rate. For this reason, it is important that all stakeholders—students, family, and school personnel—are aware of both the aspirations held by students and their families and the academic requirements that go with them.

Financial expectations. Financial expectations were measured by estimated tuition costs and the perceived ability to afford attending a four-year college. Both rural parents and female students had a mode response of between $5,001 and $10,000; male students had a higher mode of $10,001 - $15,000. The mean response for all groups was between $10,001 and $15,000. In general, these are reasonably accurate current estimates. As with many of the indices in this study, there was a high positive correlation between mothers and fathers' estimation.

The perception of affordability, however, did differ between groups. Rural seventh graders were significantly more optimistic about the ability to afford college than either of their parents. Fathers were significantly more positive than mothers although there was a strong correlation between the two. The patterns of perception of affordability were similar for mothers and fathers across reported yearly income levels. Mothers and fathers in the lowest income bracket (up to $10,000) were doubtful about affordability, parents in the middle four levels were not sure, and parents in the highest income bracket (more than $50,000) were fairly sure.

Further research needs to be conducted regarding the perceptions of affordability and the mechanisms that parents and students use to assess affordability. Rural parents reporting more than $50,000 in annual income were

fairly positive on the affordability question and parents with income less than $10,000 were doubtful despite the existence of financial aid. What variables led them to that conclusion? Were they unaware of the availability of such aid to cover many of the costs of attending college or were there other concerns such as the students' inability to work while attending school? Identifying and addressing those concerns early, while students can still make appropriate choices to prepare for college, is vital.

Aspirations versus expectations. Mau, Hitchcock, and Calvert (1998) made a distinction between aspirations as desires without constraints and expectations, which are tempered by financial and academic considerations. A concern was expressed that encouraging aspirations without due consideration for the associated expectations could lead to disappointment and the failure to achieve those aspirations.

The factor analyses of the measures of aspiration (how far in school), academic expectations (quality of school work, work ethic, and course planning), and financial expectations (affordability and estimate of tuition) show that rural parents and students tend to view those as separate rather than integrated concepts. The factors differ somewhat by the gender of the student, but the severability of academic expectations and educational aspirations remains, as does the challenge to the rural school community to attempt to forge them together.

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